Listing of Claims:

Claims 1-27 (Canceled).

28. (Currently Amended) A laser microscope which irradiates a sample dyed with a plurality of fluorescent indicators with a laser light, said laser microscope comprising:

a light source to emit the laser light toward the sample;

a spectral resolution section to spectrally resolve the laser light emitted toward the sample into laser lines of different emission wavelengths which are suitable for excitation of the respective fluorescent indicators and which have respective different optical axes;

a light receiving element array to receive the laser lines simultaneously and to output a detection signal that includes light intensity information of the laser lines; and

a controller to simultaneously control light intensities of the respective laser lines based on the detection signal;

wherein the laser microscope detects a plurality of fluorescent lights emitted from the sample when the laser lines are irradiated thereto.

29. (Previously Presented) The laser microscope according to claim 28, further comprising an acousto-optical element fixed

to an output end of the laser source to alter the light intensities of the laser lines, wherein the acousto-optical element receives a control signal outputted from the controller.

30. (Previously Presented) The laser microscope according to claim 29, wherein the controller controls the acousto-optical element to control the respective light intensities of the laser lines to be constant.

31. (Previously Presented) The laser microscope according to claim 28, wherein the light source comprises one laser light source that emits the laser light including the laser lines of the different emission wavelengths.

32. (Previously Presented) The laser microscope according to claim 28, wherein the light source comprises a plurality of laser light sources that emit laser lights of different emission wavelengths.

33. (Previously Presented) The laser microscope according to claim 28, wherein the spectral resolution section comprises one of a prism, a diffraction grating or a beam splitter.

34. (Previously Presented) The laser microscope according to claim 28, wherein the light receiving element array comprises one of a split photodiode and a solid-state image sensing device.

35. (Previously Presented) The laser microscope according to claim 28, further comprising a converging lens that is disposed between the spectral resolution section and the light receiving element array;

wherein the spectral resolution section comprises a prism, the light receiving element array comprises a one-dimensional CCD which receives the laser lights of the different emission wavelengths, and the converging lens converge the lights of the different emission wavelengths resolved by the prism on the one-dimensional CCD.

36. (Previously Presented) The laser microscope according to claim 28, further comprising:

an optical fiber to transmit the laser light from the laser source;

a collimator lens to collimate the laser light emitted from the optical fiber;

a beam splitter to split the laser light collimated by the collimator lens and to guide a part of the split laser light to the spectral resolution section; and

a converging lens to converge the lights of the different emission wavelengths on the light receiving element array.

37. (Previously Presented) The laser microscope according to claim 36, wherein the collimator lens, the beam splitter, the spectral resolution section, the converging lens, and the light receiving element array are formed in a single block, and the block is attached to and detachable from a main body of the laser microscope.

Claims 38 and 39 (Canceled).